

**Meeting of the Central Valley Flood Protection Board  
January 28, 2011**

**Staff Report**

**California Department of Transportation, District 6  
Highway 99 at Cross Creek Bridge Widening (46-0033L&R), Tulare County**

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**1.0 – ITEM**

Consider approval of Permit No. 18605-4 (Attachment B)

**2.0 – APPLICANT**

California Department of Transportation (Caltrans), District 6

**3.0 – LOCATION**

The project is located north of Goshen, along Highway 99 at Cross Creek in Tulare County. (Cross Creek, Tulare County, see Attachment A)

**4.0 – DESCRIPTION**

Applicant proposes to widen Highway 99 at bridge crossing numbers 46-0030L (southbound) and 46-0030R (northbound) of the channel of Cross Creek in Tulare County. The proposed work will consist of a median widening that will increase the width of the bridge from 42-feet to 59-feet in the southbound direction and from 61-feet, 11-inches to 63-feet, 3-inches in the northbound direction and will modify the highway from four to six lanes.

**5.0 – PROJECT ANALYSIS**

The overall design of the proposed project, as described in Section 4.0, is found to be in compliance with Title 23 standards as described in Sections 5.1 and 5.2 below. The widened structures will increase traffic flow through this reach of Highway 99, where a current restriction exists. See Attachments D and F for proposed Plans.

## 5.1 – Hydraulic Analysis

For the proposed bridge widening to be in compliance with Title 23, the bridge's soffit must not be lower than the existing soffits, as outlined in Section 128(a)(10)(B) of Title 23, and as designed, currently meets these requirements, shown below.

*“When an existing bridge being widened does not meet the clearance requirement above the design flood plane, the bottom structural members of the added section may be no lower than the bottom structural members of the existing bridge, except as may be caused by the extension of existing sloped structural members.”*

The proposed project was analyzed using a one-dimensional hydraulic model with a 100-yr control event of 12,100-cfs and a 35-yr design event of 4,500-cfs. Hydraulic impacts for the proposed project, as designed, are 0.00-feet increase in WSE and an average overall velocity increase of 0.35-feet-per-second, which raises the velocity to approximately 4-feet-per-second, see Attachment C for Hydraulic Summary Table and Profile. The proposed widened bridges are not designed to meet the design 100-yr flood event with 2-feet of freeboard and are designed at the current level of protection of 2-feet of freeboard over the 35-yr event. However, this is due to prohibitive financial costs associated to completely replace and raise the structures, see Attachment E for the Caltrans Justification Letter.

The widening will eliminate a bottleneck, in the highway, over a regulated stream whose crossing is currently under-designed. The proposed project, to widen the existing structures, will not reduce the current level of protection and although, it will not provide a hydraulic improvement, the design is compliant with Title 23 standards (as stated above) and the project is a substantial improvement for infrastructure and public safety. For the above stated reasons, staff has concluded that the project has negligible adverse incremental hydraulic effects on the floodway,

## 5.2 – Geotechnical Analysis

Upon completion of staff review of the design plans, staff is in agreement with the applicant's conclusion that this project does not bear any significant geotechnical impacts on the floodway and all work to be completed will be done in a manner that does not pose a threat to the structural integrity of the channel, structures, or floodway. All earthwork shall be completed in compliance with Permit No. 18605-4 (Attachment B) and Title 23 Standards.

## **6.0 – AGENCY COMMENTS AND ENDORSEMENTS**

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- A U.S. Army Corps of Engineers letter stating that the proposed project does not affect a federally constructed project is expected to be received prior to the January 28, 2011 Board meeting and is incorporated to Permit No. 18605-4 as Exhibit A.

## **7.0 – CEQA ANALYSIS**

Board staff has prepared the following CEQA Findings:

The Board, as a responsible agency under CEQA, has reviewed the Goshen to Kingsburg Six Lane Project Draft Initial Study/Mitigated Negative Declaration (IS/MND, SCH Number: 2006051047, April 2006) and Final Initial Study/Mitigated Negative Declaration (IS/MND, SCH Number: 2006051047, October 2006) prepared by the California Department of Transportation as the lead agency. The California Department of Transportation determined that the project would not have a significant effect on the environment and adopted the IS/MND and filed a Notice of Determination on November 8, 2006. These documents may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvfpb.ca.gov/meetings/2011/01-28-2011.cfm> under a link for this agenda item.

Board staff finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. The project proponent has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where no significant impacts will occur. These mitigation measures are included in the project proponent's IS/MND and address impacts to biological resources and noise.

## **8.0 – SECTION 8610.5 CONSIDERATIONS**

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

This project does not have significant impacts on the State Plan of Flood Control, as the project does not impair the structural or hydraulic functions of the system.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

There are no foreseeable projected future events that would impact this project.

## **9.0 – STAFF RECOMMENDATION**

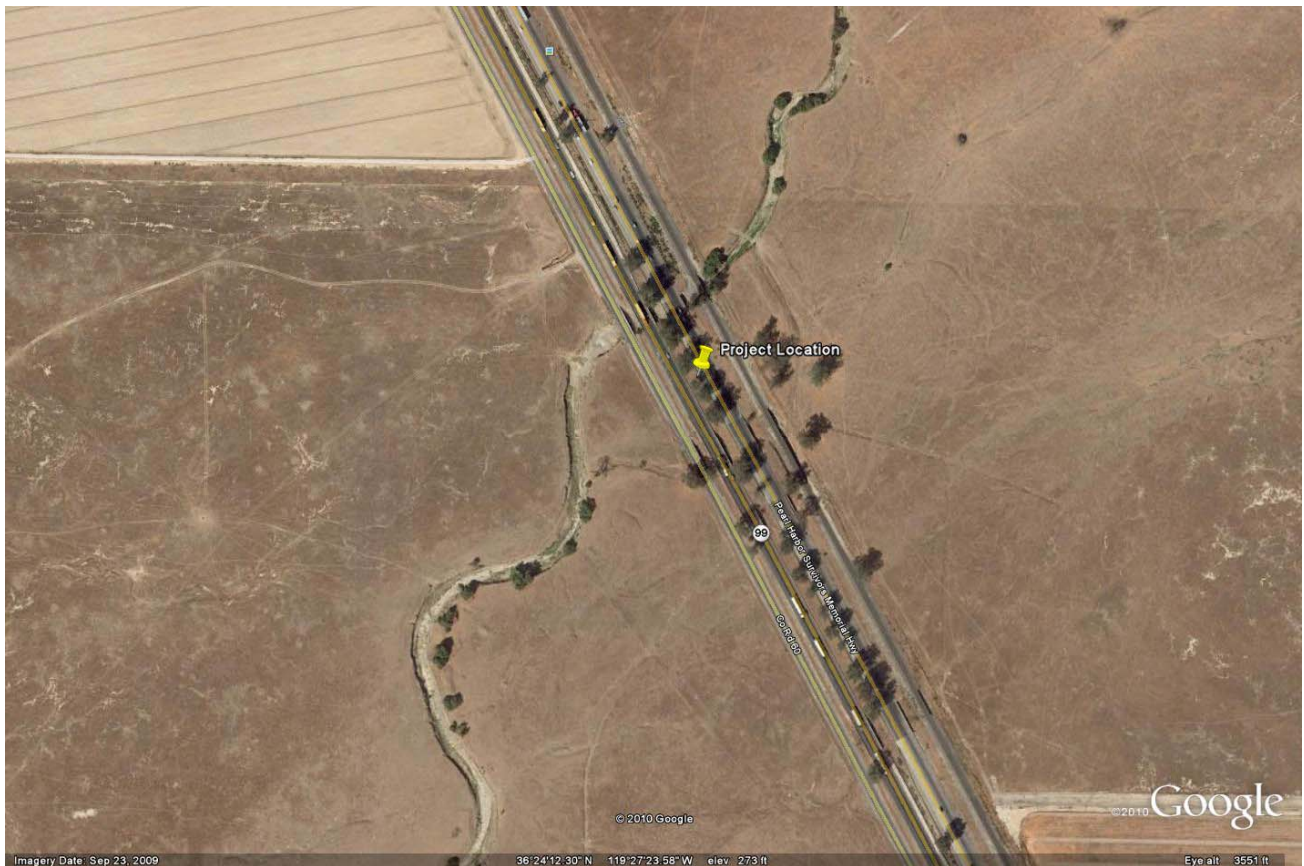
Staff recommends that the Board approve Permit No. 18605-4 (Attachment B) upon receipt of a Corps letter, adopt the Board's CEQA Findings, and an order to direct the Executive Officer to take necessary actions to prepare and execute the permit and related documents and to prepare and file a Notice of Determination with the State Clearinghouse.

**10.0 – LIST OF ATTACHMENTS**

- A. Location Map
- B. Draft Permit No. 18605-4
  - Exhibit A: Corps Non-Fed Letter (expected prior to 1-28-11 meeting)
- C. Hydraulic Summary Table and Profile
- D. General Plan
- E. Caltrans Justification Letter
- F. Highway 99 Overall Plans and Profiles

Design Review:	Nancy C. Moricz, P.E.
Environmental Review:	James Herota, E.S. Andrea Mauro, E.S.
Document Review:	David R. Williams, P.E. – Senior Engineer, WR Dan S. Fua, P.E. – Supervising Engineer, WR

# Location Maps



**DRAFT**

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
**THE CENTRAL VALLEY FLOOD PROTECTION BOARD**

**PERMIT NO. 18605-4 BD**

**This Permit is issued to:**

California Department of Transportation, District 6  
2015 East Shields Avenue, Suite 100  
Fresno, California 93726

The applicant proposes to widen Highway 99 at bridge crossing numbers 46-0033L (southbound) and 46-0033R (northbound) of the channel of cross creek in Tulare county. The proposed project will consist of a median widening that will increase the width of the bridge from 42-feet to 59-feet in the southbound direction and from 61-feet, 11-inches to 63-feet, 3-inches in the northbound direction and will modify the highway from four to six lanes. North of Goshen (Section 35, T17S, R23E, MDB&M, Cross Creek, Tulare County).

**NOTE:** Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

**(SEAL)**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Executive Officer

**GENERAL CONDITIONS:**

**ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

**TWO:** Only work described in the subject application is authorized hereby.

**THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

**FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

**FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection



Board.

**SIX:** This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

**SEVEN:** It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

**EIGHT:** This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

**NINE:** The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

**TEN:** The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

**ELEVEN:** The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

**TWELVE:** Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

#### **SPECIAL CONDITIONS FOR PERMIT NO. 18605-4 BD**

**THIRTEEN:** All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

**FOURTEEN:** There shall be no plantings within the project area under this permit, except that of native grasses, which may be required for slope protection.

**FIFTEEN:** The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion

**SIXTEEN:** The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

**SEVENTEEN:** The mitigation measures approved by the CEQA lead agency and the permittee are found in the Final Initial Study/Mitigated Negative Declaration adopted by the CEQA lead agency.



The permittee shall implement all such mitigation measures.

EIGHTEEN: The Central Valley Flood Protection Board and Department of Water Resources shall not be held liable for damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

NINETEEN: No construction work of any kind shall be done during the flood season from November 1 to July 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

TWENTY-ONE: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

TWENTY-TWO: Temporary staging, formwork, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1 to July 15.

TWENTY-THREE: Prior to start of any demolition and/or construction activities within the floodway, the applicant shall provide the Central Valley Flood Protection Board with two sets of layout plans for any and all temporary, in channel cofferdam(s), gravel work pad(s), work trestle(s), scaffolding, piles, and/or other appurtenances that are to remain in the floodway during the flood season from November 1 through July 15.

TWENTY-FOUR: Debris that may accumulate on the permitted encroachment(s) and related facilities shall be cleared off and disposed of outside the floodway after each period of high water.

TWENTY-FIVE: All debris generated by this project shall be disposed of outside the regulated channel.

TWENTY-SIX: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to July 15.

TWENTY-SEVEN: Fill material shall be placed only within the area indicated on the approved plans.

TWENTY-EIGHT: Backfill material for excavations shall be placed in 4- to 6-inch layers and compacted to at least the density of the adjacent, firm, undisturbed material.

TWENTY-NINE: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the regulated channel.

THIRTY: The soffit of the bridges shall be no lower than that of the existing bridges.

THIRTY-ONE: The work area shall be restored to the condition that existed prior to start of work.

THIRTY-TWO: The permittee shall provide supervision and inspection services acceptable to the Central Valley Flood Protection Board.

THIRTY-THREE: The permittee shall submit as-built drawings to the Department of Water Resources' Flood Project Inspection Section upon completion of the project.

THIRTY-FOUR: In the event that levee or bank erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Central Valley Flood Protection Board, to prevent further erosion.

THIRTY-FIVE: The permitted encroachment(s) shall not interfere with operation and maintenance of the present or future flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

THIRTY-SIX: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

THIRTY-SEVEN: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

THIRTY-EIGHT: The permittee shall be responsible for securing any necessary permits incidental to habitat manipulation and restoration work completed in the flood control project, and will provide any biological surveying, monitoring, and reporting needed to satisfy those permits.

THIRTY-NINE: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

FORTY: The permittee shall comply with all conditions set forth in the letter from the U.S. Army Corps of Engineers dated XXXXXX, which is attached to this permit as Exhibit A and is incorporated by reference.

FORTY-ONE: This permit shall run with the land and all conditions are binding on permittee's successors and assigns.

## **ATTACHMENT B – Exhibit A: Corps Letter**

These letters have not been received by Board staff; however, it is expected to arrive prior to the Board Meeting on January 28, 2011

Cross Creek Bridges Hydraulics Report  
 Bridges No. 46-30L/R, 46-31L/R, 46-32L/R 46-33L/R and 46-34 L/R  
 Tulare County, State Route 99  
 PM 44.62 to 45.70  
 EA: 06-324504







**Cross Creek Bridges System Analysis Summary**

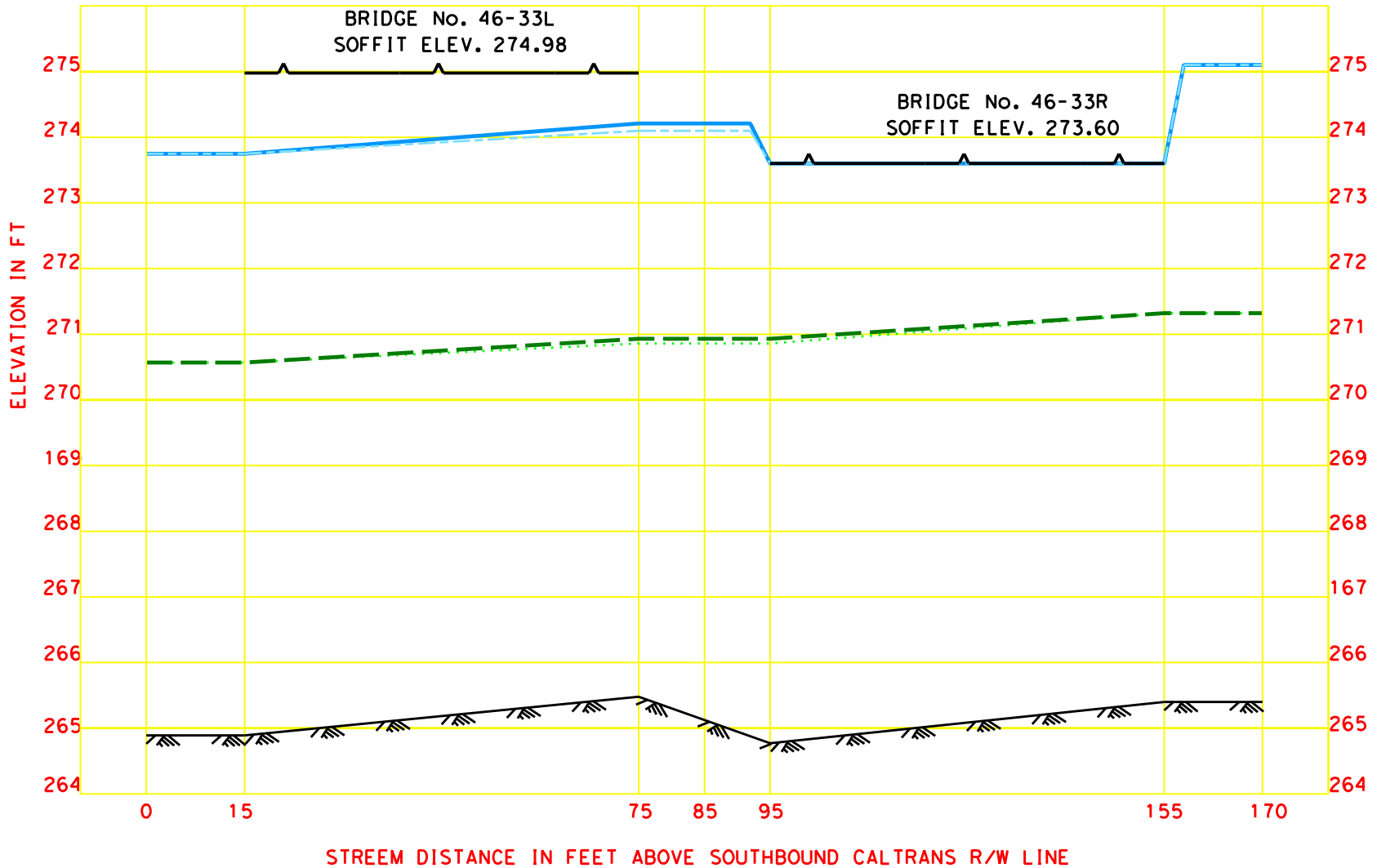
Cross Creek Bridge No.	Soffit (ft)		All Bridges with a Minimum of 2 ft Freeboard						100-year			
			35-Yr Design Flow Rate (cfs)	Water Surface Elevation (ft)		Freeboard (ft)		Design Velocity (ft/s)	Flow Rate (cfs)	Water Surface Elevation (ft)		Velocity (ft/s)
	Left Bridge	Right Bridge		Before Construction	After Construction	Left Bridge	Right Bridge			Before Construction	After Construction	
46-30 L/R	275.15	273.42	526	<b>271.32</b>	<b>271.32</b>	3.83	2.10	9.53	2293	<b>275.10</b>	<b>275.10</b>	5.88
46-31 L/R	275.18	<b>273.33</b>	984	<b>271.32</b>	<b>271.32</b>	3.86	<b>2.01</b>	3.42	2323	<b>275.10</b>	<b>275.10</b>	5.99
46-32 L/R	275.21	273.79	1317	<b>271.32</b>	<b>271.32</b>	3.89	2.47	3.66	3564	<b>275.10</b>	<b>275.10</b>	5.78
<b>46-33 L/R</b>	274.98	273.60	943	<b>271.32</b>	<b>271.32</b>	3.66	2.28	3.52	2145	<b>275.10</b>	<b>275.10</b>	6.01
46-34 L/R	274.50	273.38	700	<b>271.32</b>	<b>271.32</b>	3.18	2.06	3.27	1623	<b>275.10</b>	<b>275.10</b>	6.01
Irrigation Ditch 8x4 RCB			32	271.32	271.32			3.78	158	<b>275.10</b>	<b>275.10</b>	4.13
Total			<b>4502</b>						<b>12106</b>			

In summary, the right bridges (northbound lanes) have less capacity than the left bridges (southbound lanes). The head water elevation lost due to the extension of the left bridges (southbound) was mitigated by replacing the right bridge No. 46-34R with a larger bridge. The before construction and after construction water surface elevations downstream and upstream of Route 99 doesn't change, and the design flow rate, 4500 cfs is maintained. The design flow rate water surface elevation, maintaining a minimum of 2 ft of freeboard in all bridges is 271.33. The 100-yr flow rate water surface elevation is 275.10 ft and the overtopping elevation is 275.29 ft.

CROSS CREEK AT STATE ROUTE 99  
 TULARE COUNTY  
 BRIDGE No. 46-33 L/R  
 FLOOD PROFILES

LEGEND

-  SOFFIT
-  100-YR WSE (AFTER CONSTRUCTION)
-  100-YR WSE (BEFORE CONSTRUCTION)
-  35-YR WSE (BEFORE CONSTRUCTION)
-  35-YR WSE (AFTER CONSTRUCTION)
-  STREAM BED





DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9 R0.0/R1.2	624	687

REGISTERED CIVIL ENGINEER  
 DANNY C. VANG  
 No. C60613  
 Exp. 12/31/10  
 CIVIL  
 STATE OF CALIFORNIA

09/01/09  
 REGISTERED PROFESSIONAL ENGINEER DATE

1-25-10  
 PLANS APPROVAL DATE

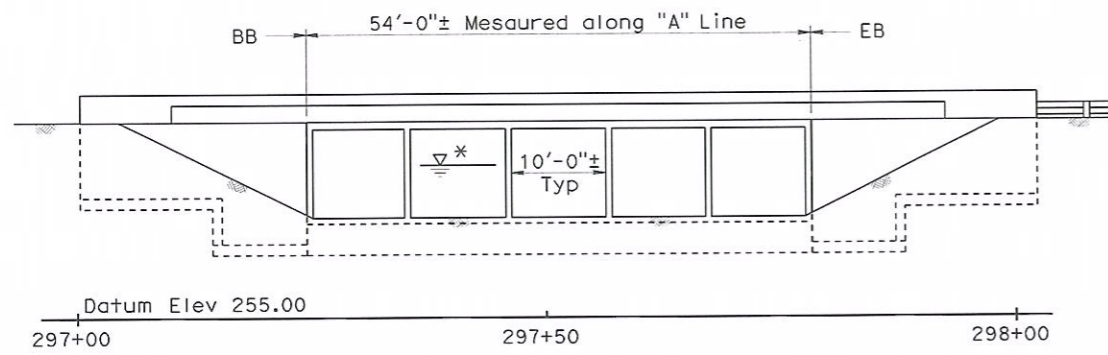
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MGE ENGINEERING, INC.  
 7415 GREENHAVEN DRIVE, SUITE 100  
 SACRAMENTO, CALIFORNIA 95831

LIM & NASCIMENTO ENGINEERING  
 20 EMPIRE DRIVE  
 LAKE FOREST, CALIFORNIA 92630

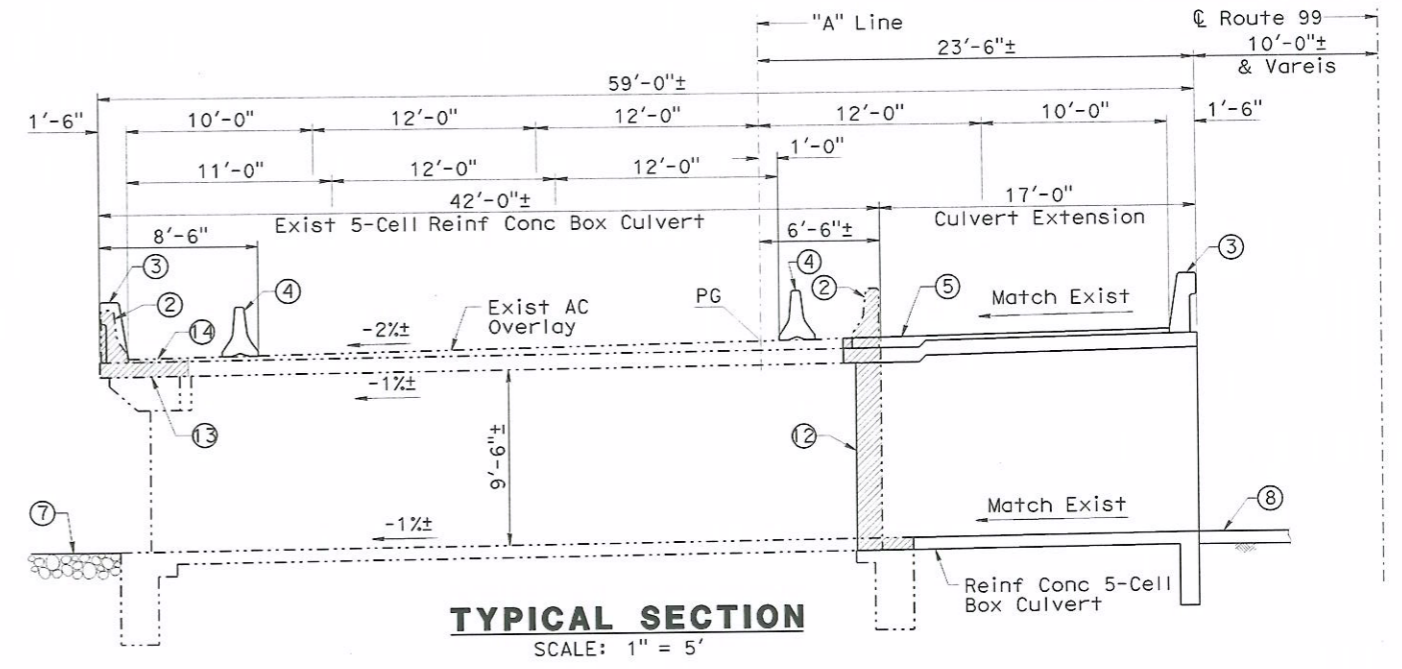
**QUANTITIES**

BRIDGE REMOVAL (PORTION), LOCATION H	LUMP	SUM
HOT MIX ASPHALT (TYPE B)	29	TON
STRUCTURAL CONCRETE, BOX CULVERT	135	CY
ARCHITECTURAL TEXTURE (DRY STACKED STONE)	297	SOFT
DRILL AND BOND DOWEL	3	LF
BAR REINFORCING STEEL (BOX CULVERT)	20,570	LB
PREPARE AND STAIN CONCRETE	297	SOFT
CONCRETE BARRIER (TYPE 736 MODIFIED)	175	LF

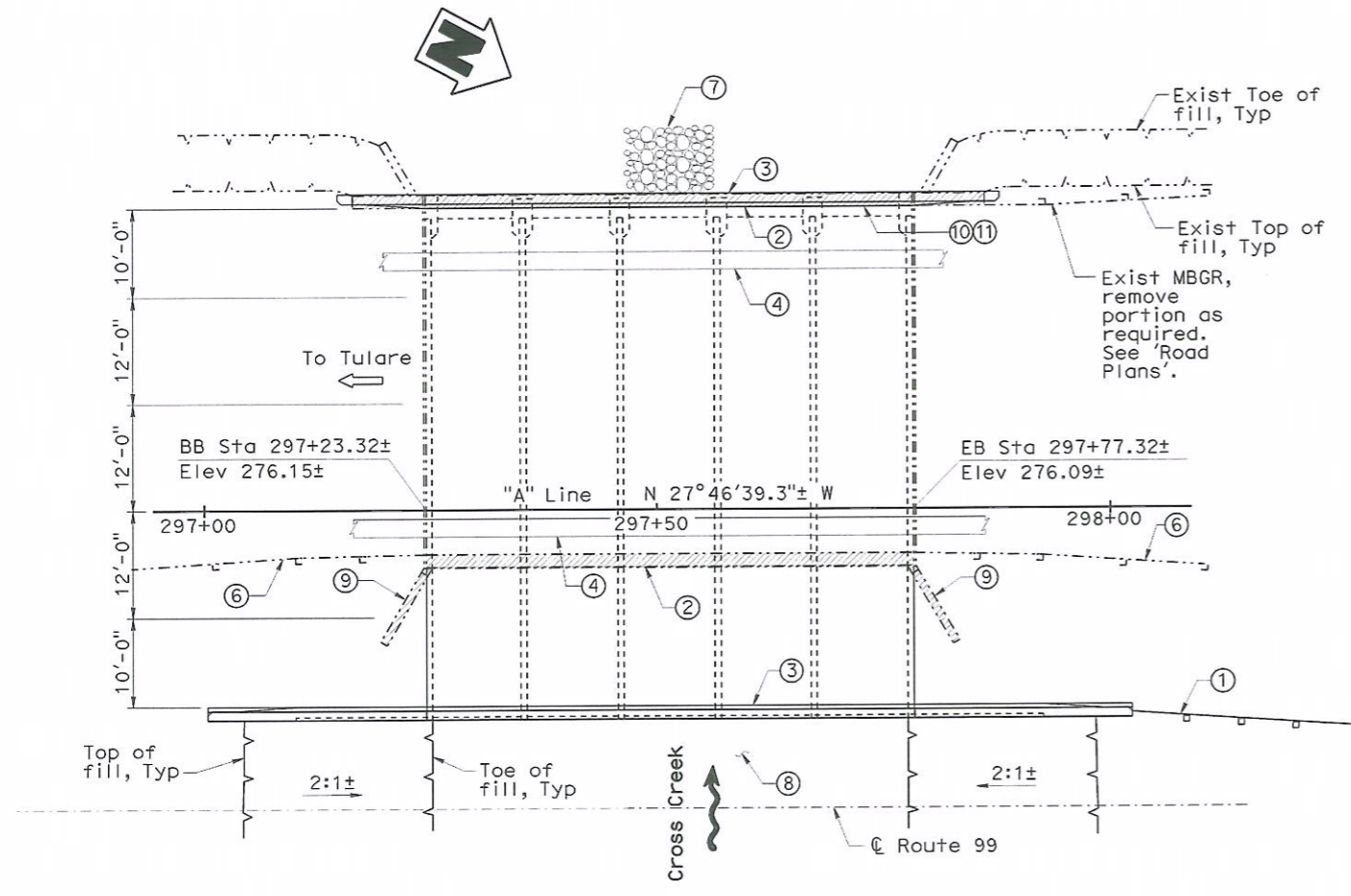


\* For 'Hydrologic Summary', see "Foundation Plan" sheet.

**ELEVATION**  
SCALE: 1" = 10'



**TYPICAL SECTION**  
SCALE: 1" = 5'



**PLAN**  
SCALE: 1" = 10'

- LEGEND**
- ▨ Indicates Limits of Bridge Removal (Portion)
  - Indicates Exist Structure
  - Indicates New Structure
  - Indicates Direction of Flow
  - ⇨ Indicates Direction of Travel
  - ① MBGR, See 'Road Plans'
  - ② Remove Exist Concrete Barrier Type 27R/27/27B
  - ③ Concrete Barrier Type 736 (Mod)
  - ④ Temporary "k" Railing, See 'Road Plans'
  - ⑤ Hot Mix Asphalt (Type B), Thickness Varies
  - ⑥ Exist MBGR to be Removed, See 'Road Plans'
  - ⑦ Rock Slope Protection, See 'Road Plans'
  - ⑧ Pave with Concrete, See 'Road Plans'
  - ⑨ Remove Exist Wingwall
  - ⑩ Paint "Cross Creek Bridge"
  - ⑪ Paint "Br. No. 46-0033L"
  - ⑫ Remove Exist Concrete
  - ⑬ Remove Portion of Exist Reinf Conc Slab
  - ⑭ Remove Portion of Exist AC Overlay

**INDEX TO PLANS**

Sheet No.	Title
1	General Plan
2	Foundation Plan
3	Extension Details No. 1
4	Extension Details No. 2
5	Extension Details No. 3
6	Barrier Architectural Surface Detail
7	As-Built Log of Test Borings

**STANDARD PLANS**  
Dated May 2006

A10A	Acronyms and Abbreviations (Sheet 1 of 2)
A10B	Acronyms and Abbreviations (Sheet 2 of 2)
A10C	Symbols (Sheet 1 of 2)
A10D	Symbols (Sheet 2 of 2)
A62A	Excavation and Backfill - Miscellaneous Details
A62B	Limits of Payment for Excavation and Backfill - Bridge Surcharge and Wall
A62E	Excavation and Backfill - Cast-In-Place Reinforced Concrete Box and Arch Culverts
B0-1	Bridge Details
B3-8	Retaining Wall Details No. 1
B11-56	Concrete Barrier Type 736
D84	Box Culvert Wingwalls Types A, B and C

Note:  
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

Fritz Hoffman DESIGN OVERSIGHT Sept 8, 2009 SIGN OFF DATE	DESIGN BY D. Vang	CHECKED D. Wang	LOAD FACTOR DESIGN LIVE LOADING: HS20-44	PREPARED FOR THE <b>STATE OF CALIFORNIA</b> DEPARTMENT OF TRANSPORTATION	Guoping Xu PROJECT ENGINEER	BRIDGE NO. 46-0033L	<b>CROSS CREEK BRIDGE (WIDEN)</b>  <b>GENERAL PLAN</b>
	DETAILS BY X. Sun	CHECKED D. Wang	LAYOUT BY D. Vang			CHECKED D. Wang	
QUANTITIES BY D. Vang	CHECKED K. Wang	SPECIFICATIONS BY R. Price	PLANS AND SPECS COMPARED R. Sennett	CU 06249 EA 324501	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 1 OF 7

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

FILE => 46-00331-a-gp01.dgn

Attachment D - General Plan



DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, RO.0/R1.2	618	687

REGISTERED CIVIL ENGINEER DATE 09/01/09  
 DANNY C. YANG  
 No. C60613  
 Exp. 12/31/10  
 CIVIL  
 STATE OF CALIFORNIA

1-25-10  
 PLANS APPROVAL DATE

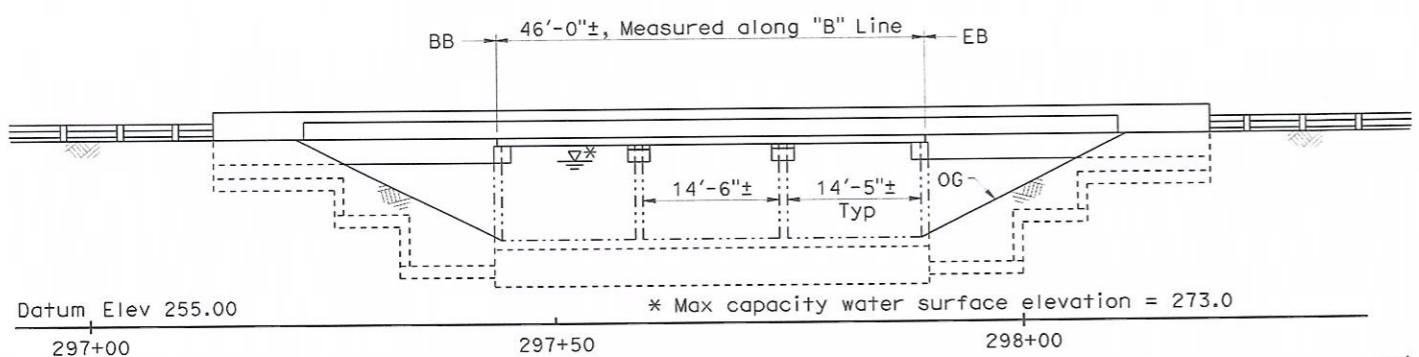
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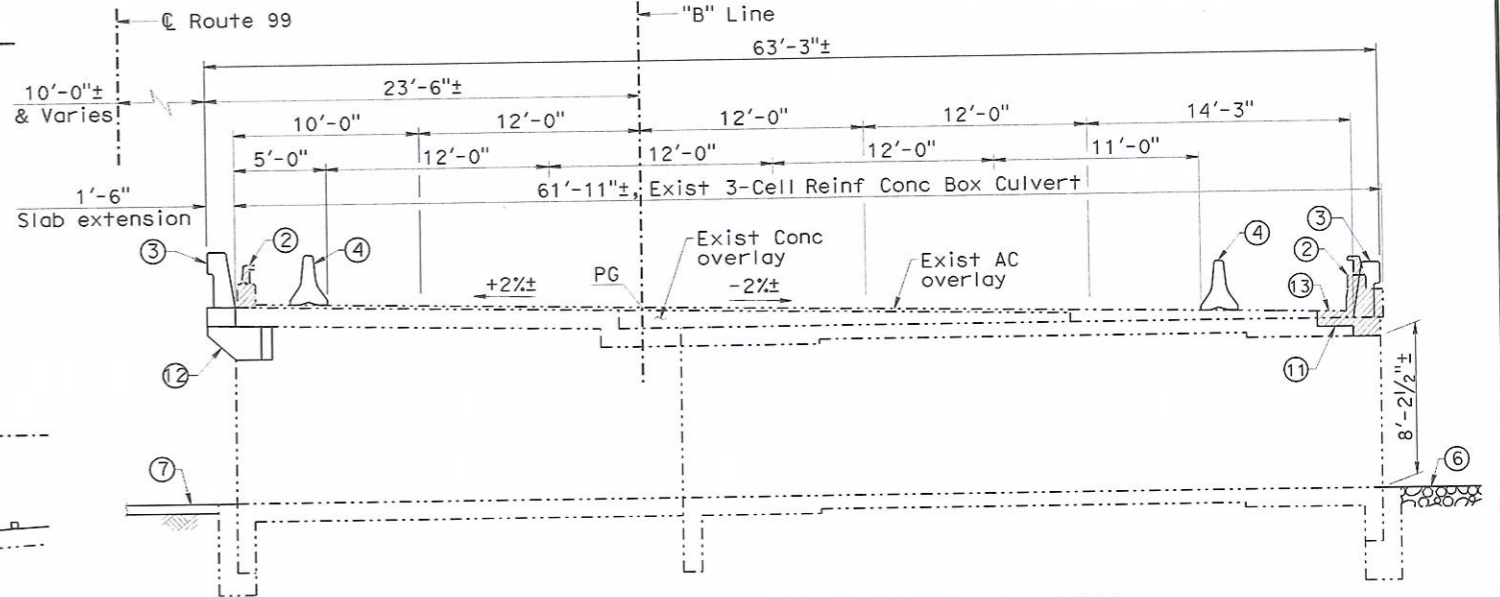
LIM & NASCIMENTO ENGINEERING  
 20 EMPIRE DRIVE  
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**QUANTITIES**

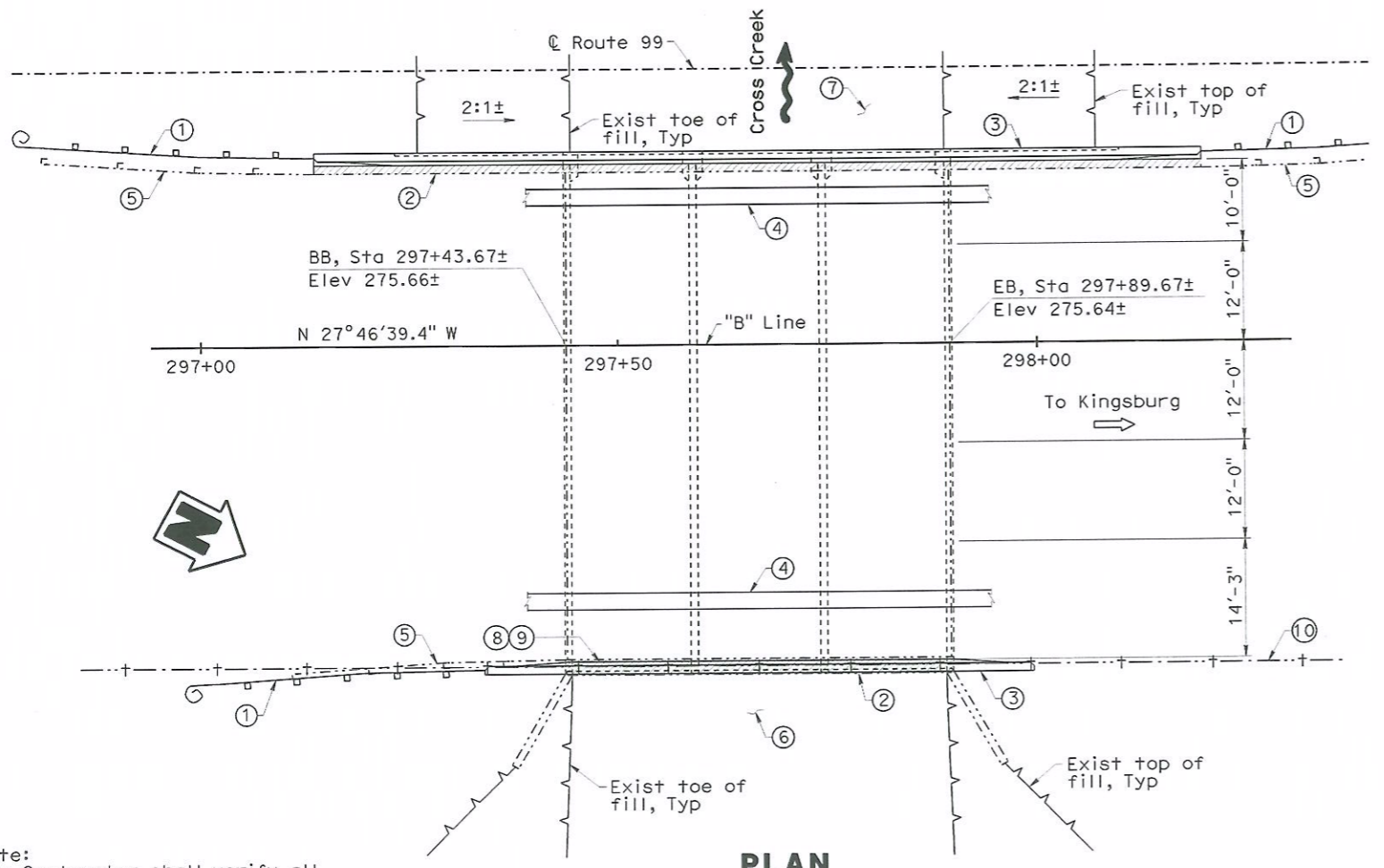
BRIDGE REMOVAL (PORTION), LOCATION G	LUMP	SUM
HOT MIX ASPHALT (TYPE B)	3	TON
STRUCTURAL CONCRETE, BOX CULVERT	18	CY
ARCHITECTURAL TEXTURE (DRY STACKED STONE)	253	SOFT
DRILL AND BOND DOWEL	171	LF
DRILL AND BOND DOWEL (CHEMICAL ADHESIVE)	53	EA
BAR REINFORCING STEEL (BOX CULVERT)	2,785	LB
PREPARE AND STAIN CONCRETE	253	SOFT
CONCRETE BARRIER (TYPE 736 MODIFIED)	172	LF



**MIRRORED ELEVATION**  
SCALE: 1" = 10'



**TYPICAL SECTION**  
SCALE: 1" = 5'



**PLAN**  
SCALE: 1" = 10'

**LEGEND**

- ▨ Indicates Limits of Bridge Removal (Portion)
- Indicates Exist Structure
- Indicates New Structure
- ~~~~~ Indicates Direction of Flow
- ➡ Indicates Direction of Travel
- ① MBGR, See 'Road Plans'
- ② Remove Exist Concrete Barrier with Type 9 Metal Railing. Salvage Metal Portion of Exist Barrier Rail.
- ③ Concrete Barrier Type 736 (Mod)
- ④ Temporary "K" Railing, See 'Road Plans'
- ⑤ Exist MBGR to be Removed, See 'Road Plans'
- ⑥ Rock Slope Protection, See 'Road Plans'
- ⑦ Pave with Concrete, See 'Road Plans'
- ⑧ Paint "Cross Creek Bridge"
- ⑨ Paint "Br. No. 46-0033R"
- ⑩ Exist Underground Telephone Conduit to Remain
- ⑪ Remove Portion of Exist Reinf Conc Slab
- ⑫ Reinforced Concrete Corbel
- ⑬ Remove Portion of Exist AC Overlay

**STANDARD PLANS**  
Dated May 2006

- A10A Acronyms and Abbreviations (Sheet 1 of 2)
- A10B Acronyms and Abbreviations (Sheet 2 of 2)
- A10C Symbols (Sheet 1 of 2)
- A10D Symbols (Sheet 2 of 2)
- B11-56 Concrete Barrier Type 736

**INDEX TO PLANS**

Sheet No.	Title
1	General Plan
2	Extension Details No. 1
3	Extension Details No. 2
4	Extension Details No. 3
5	Barrier Architectural Surface Detail
6	As-Built Log of Test Borings

**Notes:**

1. For 'General Notes', see "Extension Details No. 2" sheet.
2. Vertical datum is per NAVD 88.

Note:  
The Contractor shall verify all controlling field dimensions before ordering or fabricating any material.

DESIGN OVERSIGHT Fritz Hoffman Sept 8, 2009 SIGN OFF DATE	DESIGN BY D. Vang	CHECKED G. Xu	LOAD FACTOR DESIGN	LIVE LOADING: HS20-44	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	BRIDGE NO. 46-0033R	<b>CROSS CREEK BRIDGE (WIDEN)</b>  <b>GENERAL PLAN</b>
	DETAILS BY X. Sun	CHECKED G. Xu	LAYOUT BY D. Vang	CHECKED G. Xu		PROJECT ENGINEER Guoping Xu	
QUANTITIES BY D. Vang	CHECKED K. Wang	SPECIFICATIONS BY R. Price	PLANS AND SPECS COMPARED R. Sennett	CU 06249 EA 324501	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	SHEET 1 OF 6



**DEPARTMENT OF TRANSPORTATION****DISTRICT 6**

2015 E. Shields Avenue  
Fresno CA 93726  
PHONE (559) 243-3421  
FAX (559) 243-3426  
TTY (559) 488-4066



*Flex your power!  
Be energy efficient!*

January 10, 2011

Nancy C. Moricz  
P.E. - Engineer, WR  
Central Valley Flood Protection Board  
Flood System Improvement Section  
3310 El Camino Ave., Room 151  
Sacramento, CA 95821

Dear Ms. Moricz,

Caltrans has a project ready to start construction to widen 13.8 miles of State Route 99 in Tulare County from 0.2 mile north of the Goshen Overhead to 0.2 mile north of the Conejo Avenue Separation. The capacity increase project proposes to widen the existing four and five lane freeway to a six lane freeway and widen shoulders to ten feet.

In order to accommodate the new lanes, Caltrans is planning to widen bridges at all five Cross Creek locations, referenced as follows: Bridges No. 46-30R/L, 46-31R/L, 46-32R/L, 46-33R/L, and 46-34R/L. The distance between the first Bridge No. 46-30R/L and the last Bridge 46-34R/L is 5800 feet. The existing bridges are undersized for both 100 year and 50 year storms. The bridges do not have the capacity to pass the 100 year flow rate and maintain a 2-foot freeboard.

Caltrans does not plan to increase the flow capacity of the system of bridges in this project to meet the 100 year flow. Caltrans plans to remove and replace Bridge No. 46-34R with a larger bridge in order to mitigate a small capacity loss due to widening the structures and maintain a net zero loss in hydraulic capacity in the system of bridges.

The main reason that Caltrans does not propose to meet the 100 year freeboard regulation is based on cost. In order to meet this requirement, an approximate 1.3 mile length of the freeway would need to be elevated by three feet and all ten bridges would need to be replaced at a cost of approximately \$21 million. Further study would be required to determine any impacts to the adjacent parallel county frontage road and the downstream channels and flood zone.

The impacts of raising the highway profile and replacing the bridges would require additional environmental study. Army Corps of Engineers has taken jurisdiction for two Cross Creek bridge locations, Bridge No. 46-33R/L and Bridge No. 46-34R/L. The project requires a Nationwide permit for Section 404 compliance from Army Corps of Engineers. Impacting a larger area could require obtaining a higher level permit, an Individual permit for Section 404 compliance, and more costs for mitigation. Cross Creek Bridge No. 46-33R/L has been identified as a San Joaquin Kit Fox crossing. Impacting a

Nancy C. Moricz  
January 7, 2011  
Page 2

larger area would require additional consultation of the Biological Opinion with US Fish and Wildlife Service. This could result in additional costs for mitigation.

At this stage of our project, implementing a major project scope change could delay the project's capacity and related safety benefits to the travelling public by more than one year and greatly jeopardize funding availability for the project.

For additional information, please contact Phillip Sanchez, Project Manager, at (559) 243-3466.

Sincerely,



MIKE R. RASTEGAR  
Deputy District Director  
Program/Project Management

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	23	687

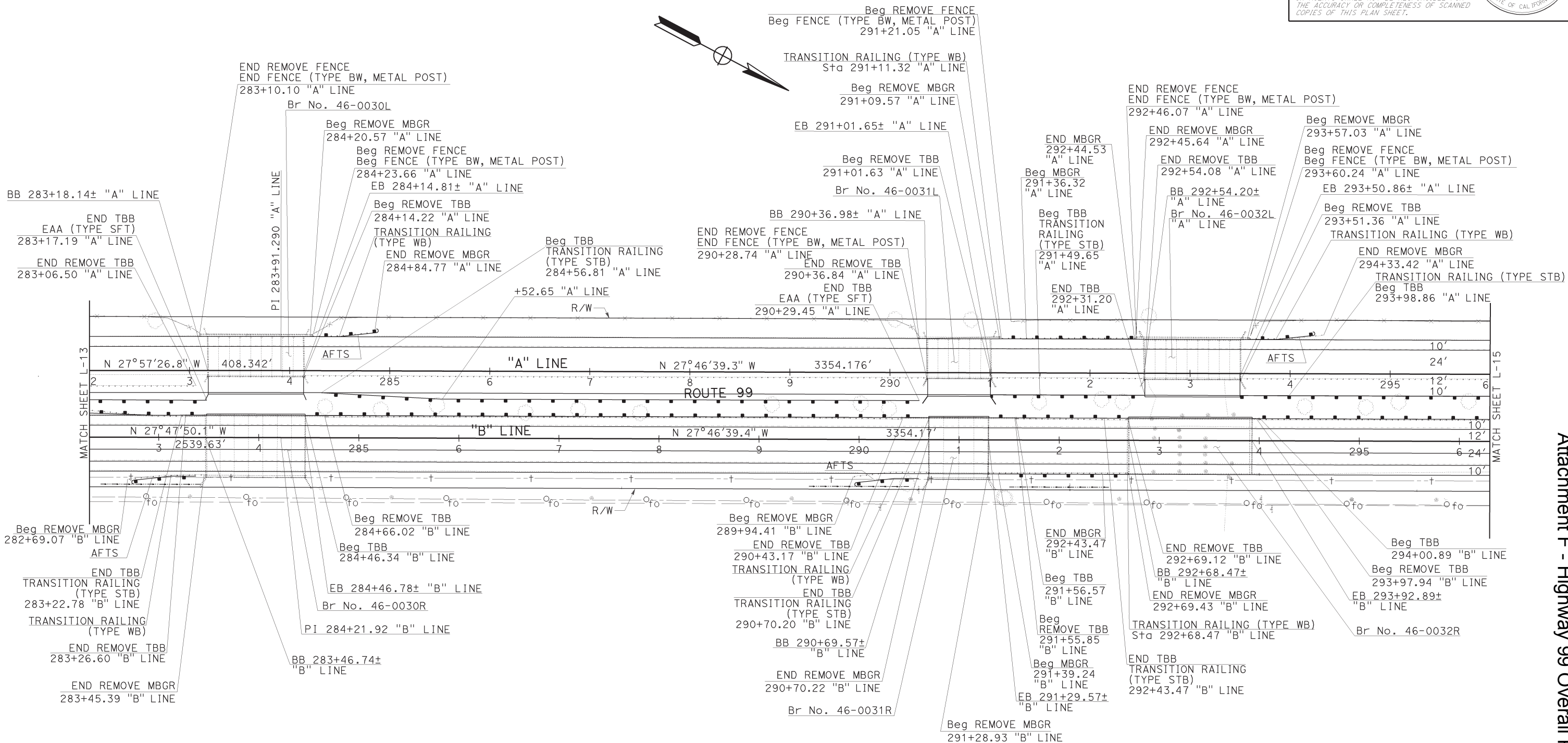
<i>Michael D. Foster</i>	9/30/09
REGISTERED CIVIL ENGINEER	DATE
1-25-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER	MICHAEL D. FOSTER
No. 62493	Exp. 9/30/11
CIVIL	

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NOTE: FOR ACCURATE RIGHT OF WAY AND ACCESS DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



REVISOR: SUKHJINDER SINGH, MICHAEL FOSTER  
 CALCULATED/DESIGNED BY: JUN XU  
 CHECKED BY:  
 FUNCTIONAL SUPERVISOR:  
 DEPARTMENT OF TRANSPORTATION DESIGN

LAYOUT  
 SCALE: 1" = 50'  
 L-14

Attachment F - Highway 99 Overall Plans and Profiles



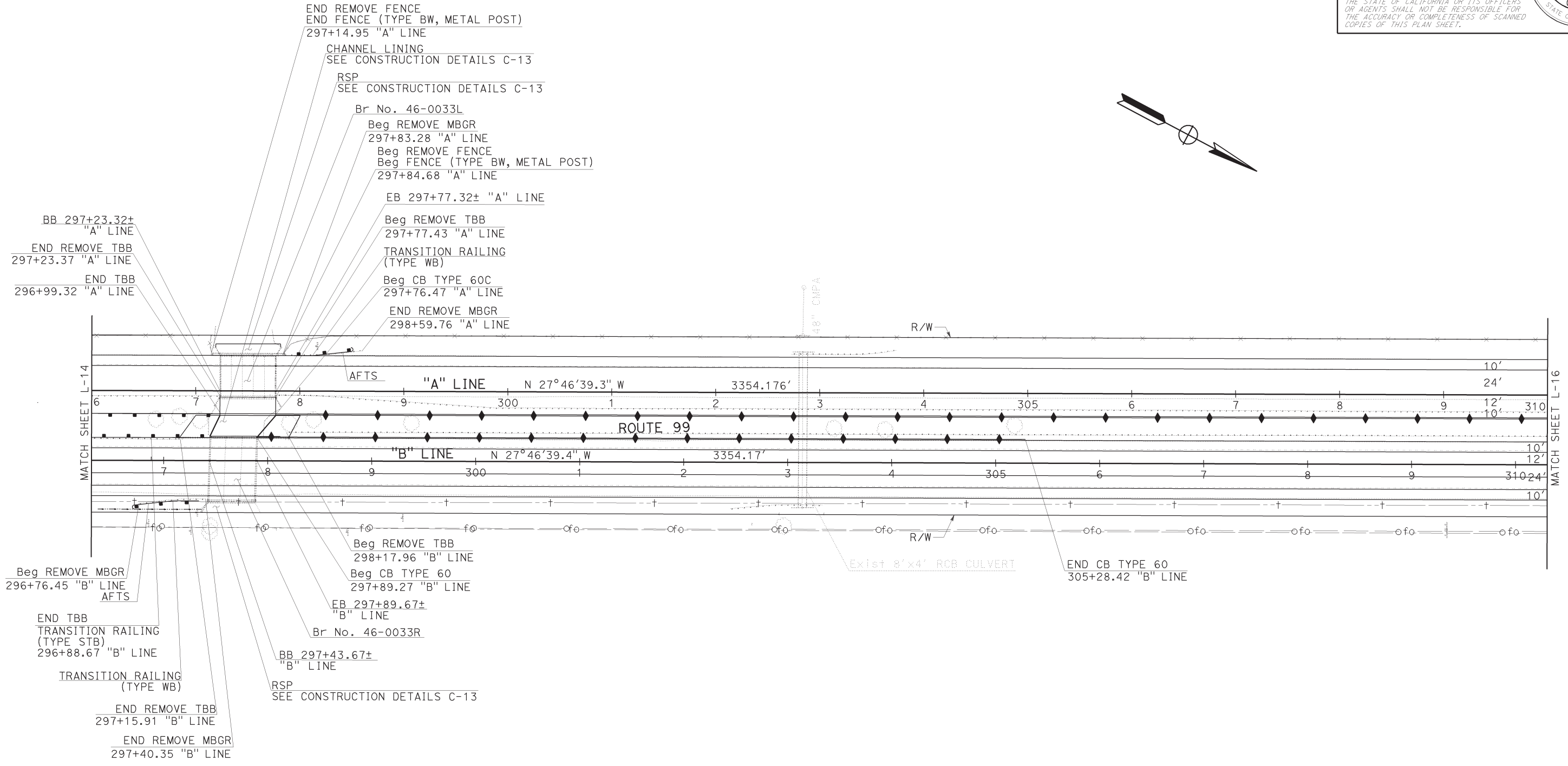
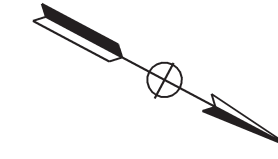
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06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	24	687

Michael D. Foster 9/30/09  
 REGISTERED CIVIL ENGINEER DATE  
 1-25-10  
 PLANS APPROVAL DATE

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MICHAEL D. FOSTER  
 No. 62493  
 Exp. 9/30/11  
 CIVIL  
 STATE OF CALIFORNIA

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 CALCULATED/DESIGNED BY  
 SUKHJINDER SINGH  
 MICHAEL FOSTER  
 REVISED BY  
 DATE REVISOR  
 x  
 x  
 x  
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 x  
 x  
 x  
 x

Attachment F - Highway 99 Overall Plans and Profiles

LAYOUT  
SCALE: 1" = 50' L-15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	25	687

<i>Michael D. Foster</i>	9/30/09
REGISTERED CIVIL ENGINEER	DATE
1-25-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. FOSTER
No. 62493
Exp. 9/30/11
CIVIL

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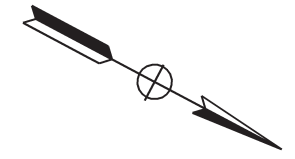
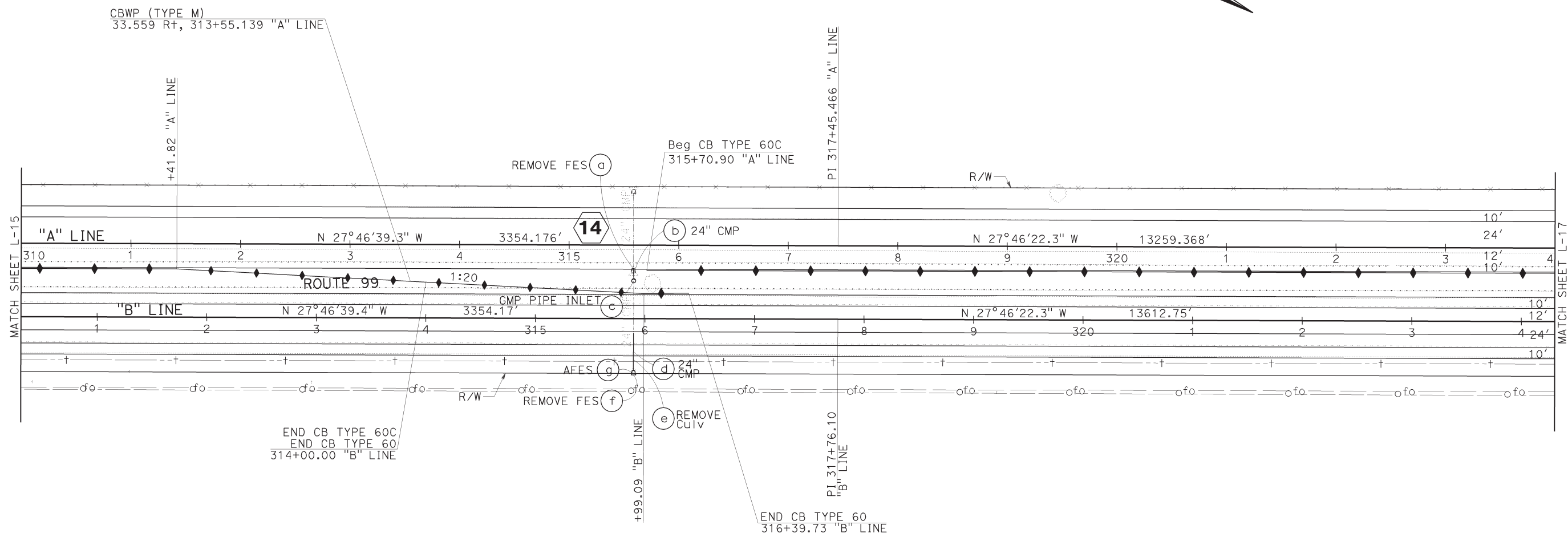
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 DESIGN

FUNCTIONAL SUPERVISOR  
**JUN XU**

CALCULATED-DESIGNED BY  
 CHECKED BY

SUKHJINDER SINGH  
 MICHAEL FOSTER

REVISED BY  
 DATE REVISED



**LAYOUT**

SCALE: 1" = 50' **L-16**

Attachment F - Highway 99 Overall Plans and Profiles

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	26	687

<i>Michael D. Foster</i>	9/30/09
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1-25-10	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. FOSTER
No. 62493
Exp. 9/30/11
CIVIL

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FUNCTIONAL SUPERVISOR  
**JUN XU**

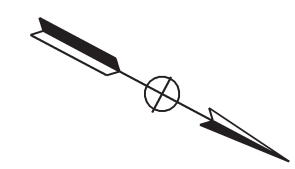
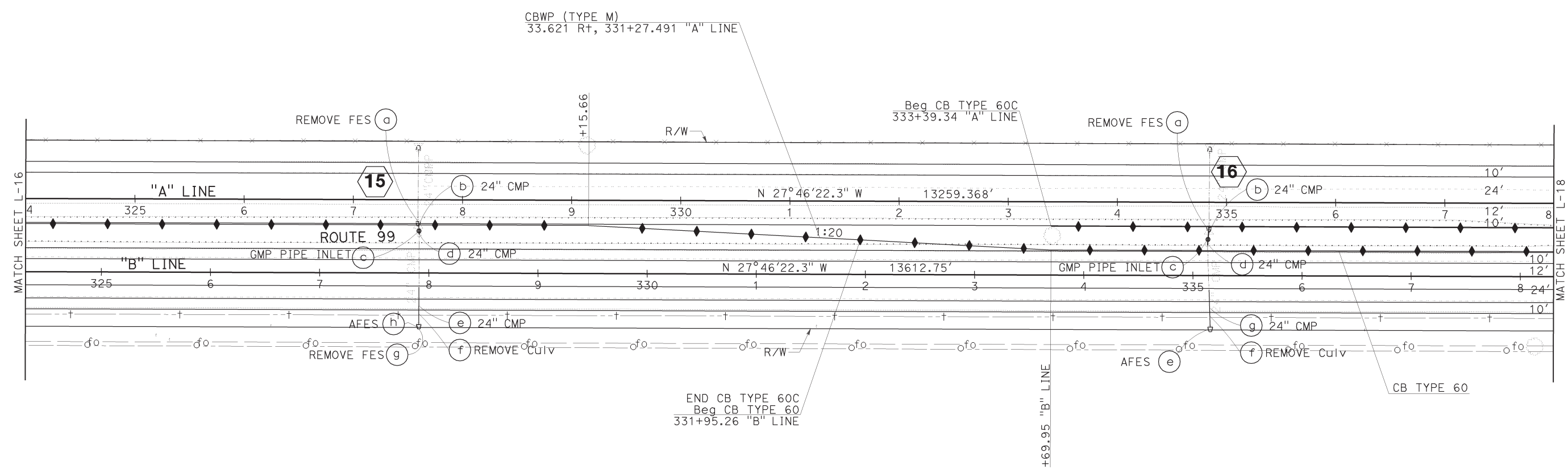
CALCULATED-DESIGNED BY  
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SUKHJINDER SINGH  
 MICHAEL FOSTER

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 DATE

REVISED BY  
 DATE

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 DATE



LAYOUT

SCALE: 1" = 50' L-17

Attachment F - Highway 99 Overall Plans and Profiles

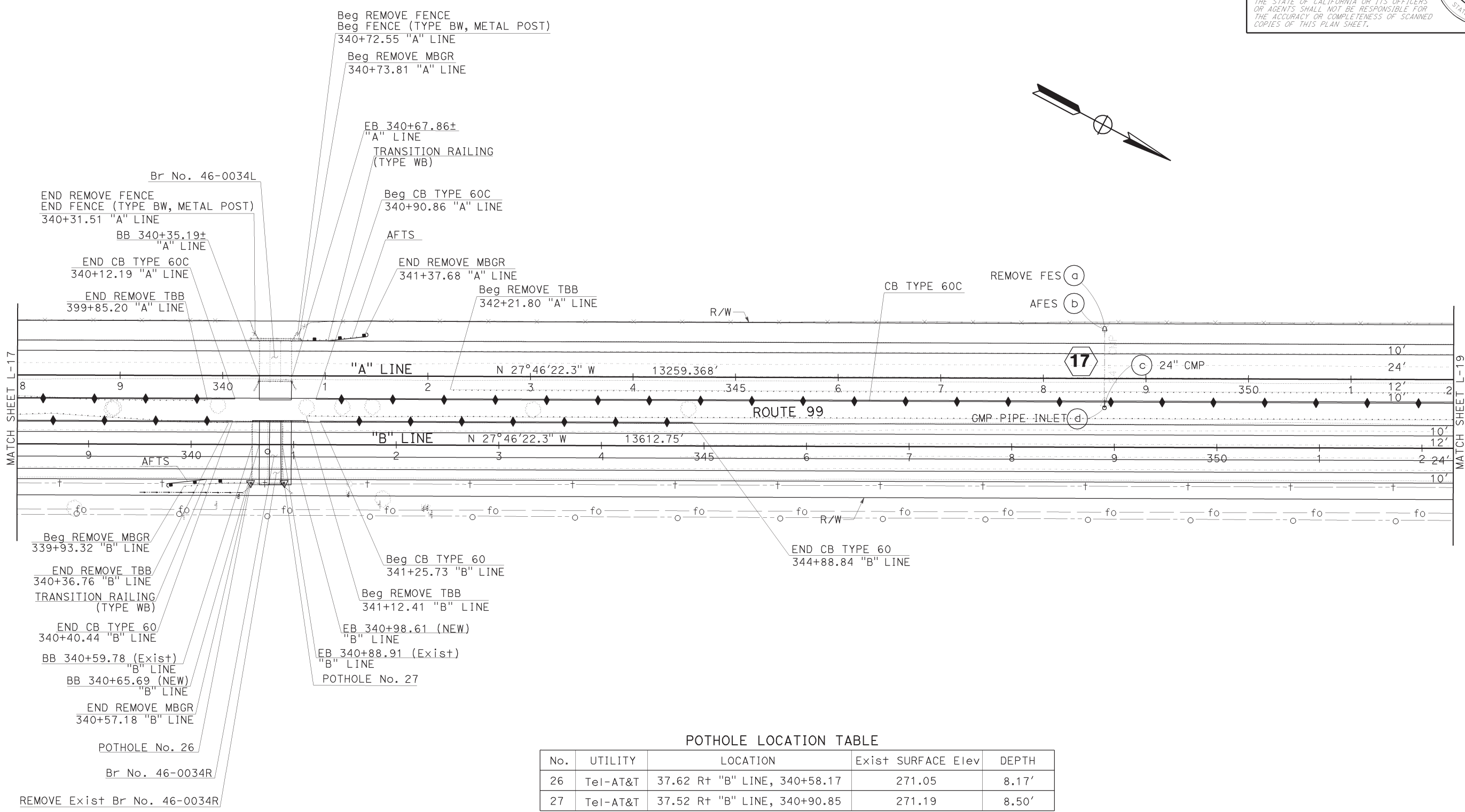
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06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	27	687

Michael D. Foster 9/30/09  
 REGISTERED CIVIL ENGINEER DATE  
 No. 62493  
 Exp. 9/30/11  
 CIVIL

1-25-10  
 PLANS APPROVAL DATE

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POTHOLE LOCATION TABLE

No.	UTILITY	LOCATION	Exist SURFACE Elev	DEPTH
26	Tel-AT&T	37.62 Rt "B" LINE, 340+58.17	271.05	8.17'
27	Tel-AT&T	37.52 Rt "B" LINE, 340+90.85	271.19	8.50'

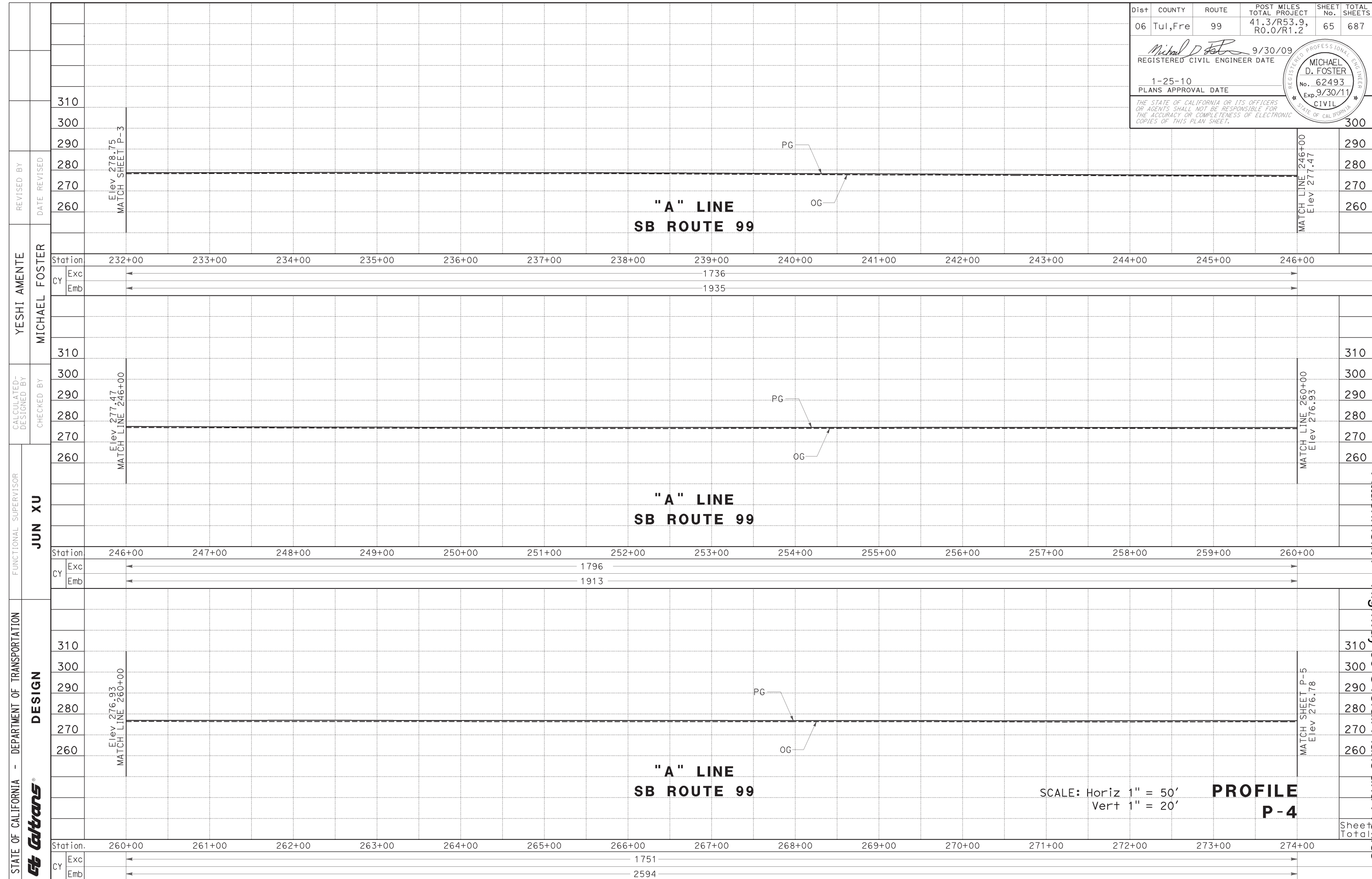
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**Caltrans**  
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 JUN XU  
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 CHECKED BY  
 CALCULATED/DESIGNED BY  
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 MICHAEL FOSTER  
 REVISED BY  
 DATE REVISED

Attachment F - Highway 99 Overall Plans and Profiles  
 LAST REVISION DATE PLOTTED => 01-FEB-2010  
 01-19-10 TIME PLOTTED => 08:56

**LAYOUT**  
 SCALE: 1" = 50' **L-18**



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	65	687
			<i>Michael D. Foster</i> 9/30/09 REGISTERED CIVIL ENGINEER DATE		
			1-25-10 PLANS APPROVAL DATE		
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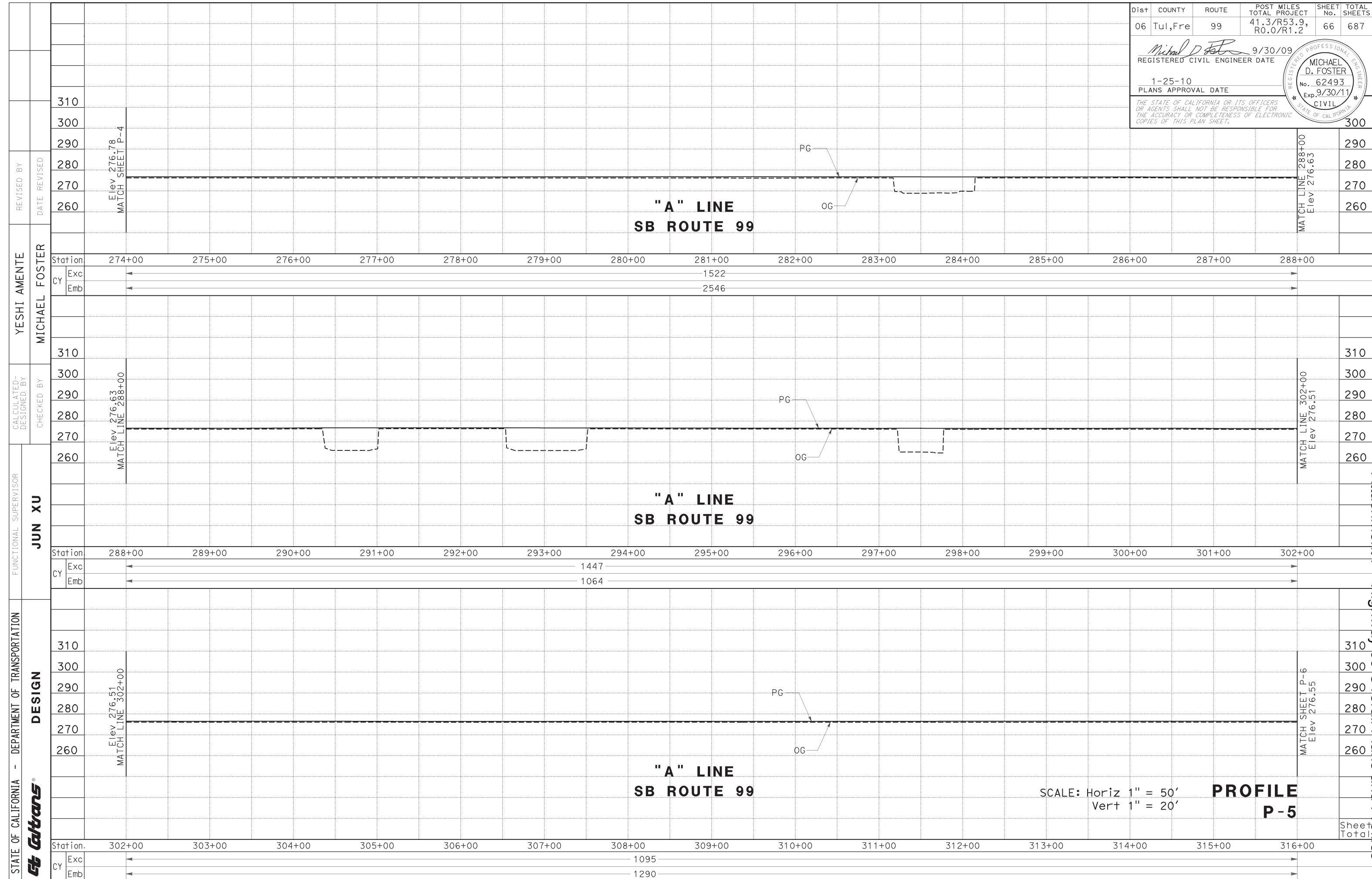


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**Caltrans**  
 DESIGN  
 FUNCTIONAL SUPERVISOR: JUN XU  
 CALCULATED/DESIGNED BY: YESHI AMENTE  
 CHECKED BY: MICHAEL FOSTER  
 REVISED BY: YESHI AMENTE  
 DATE REVISED:

SCALE: Horiz 1" = 50'  
 Vert 1" = 20'  
**PROFILE P-4**

Attachment E - Highway 99 Overall Plans and Profiles  
 Sheet Total  
 09-25-09 TIME PLOTTED => 08:54

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	66	687
			9/30/09		
			REGISTERED CIVIL ENGINEER DATE		
			1-25-10		
			PLANS APPROVAL DATE		
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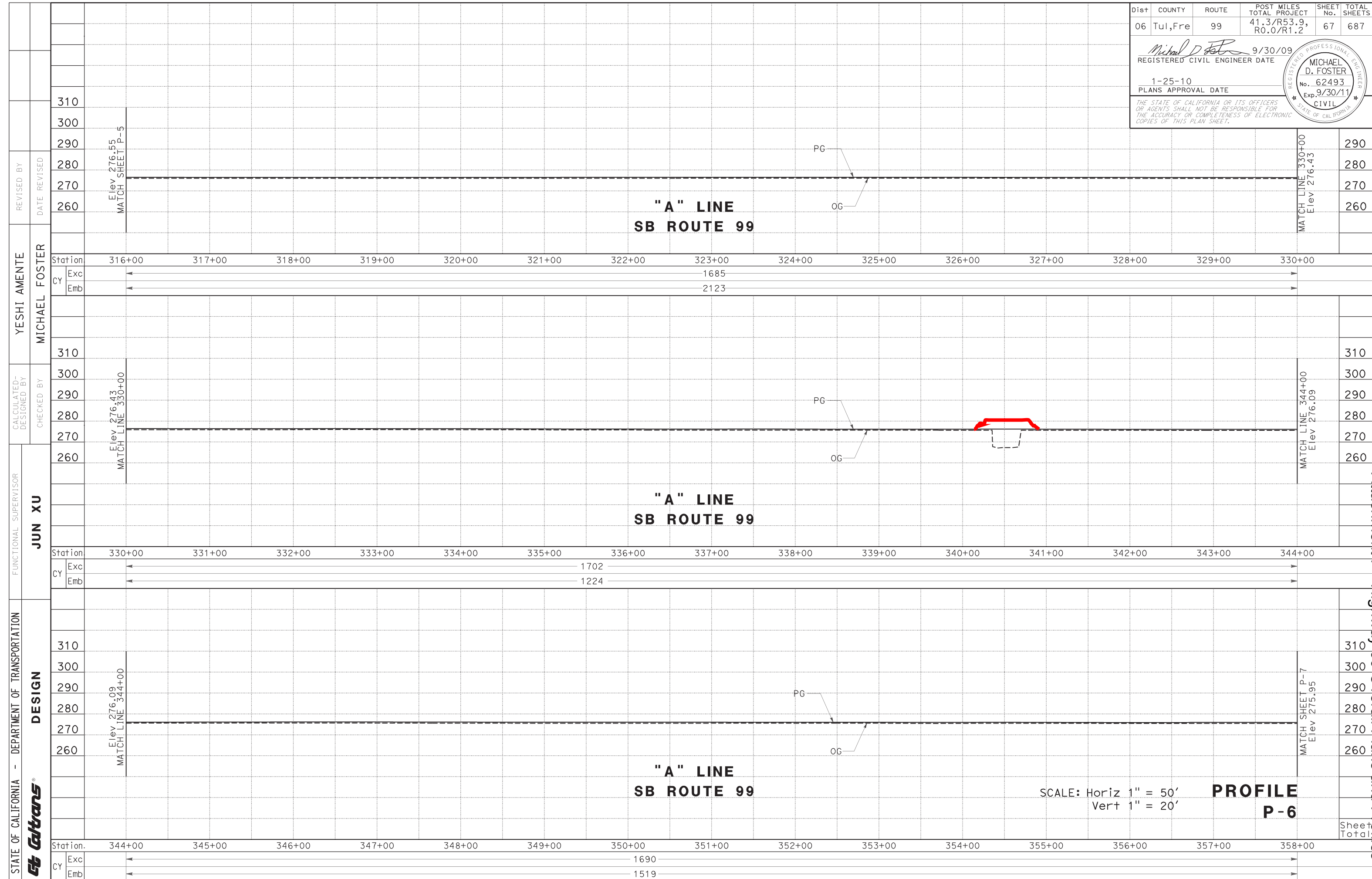


SCALE: Horiz 1" = 50'  
Vert 1" = 20'

**PROFILE P-5**

Attachment E - Highway 99 Overall Plans and Profiles

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Tul, Fre	99	41.3/R53.9, R0.0/R1.2	67	687
			<i>Michael D. Foster</i> 9/30/09 REGISTERED CIVIL ENGINEER DATE		
			1-25-10 PLANS APPROVAL DATE		
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SCALE: Horiz 1" = 50'  
 Vert 1" = 20'  
**PROFILE P-6**

Attachment E - Highway 99 Overall Plans and Profiles